

Sheet anatomy

(1)



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Large intestine

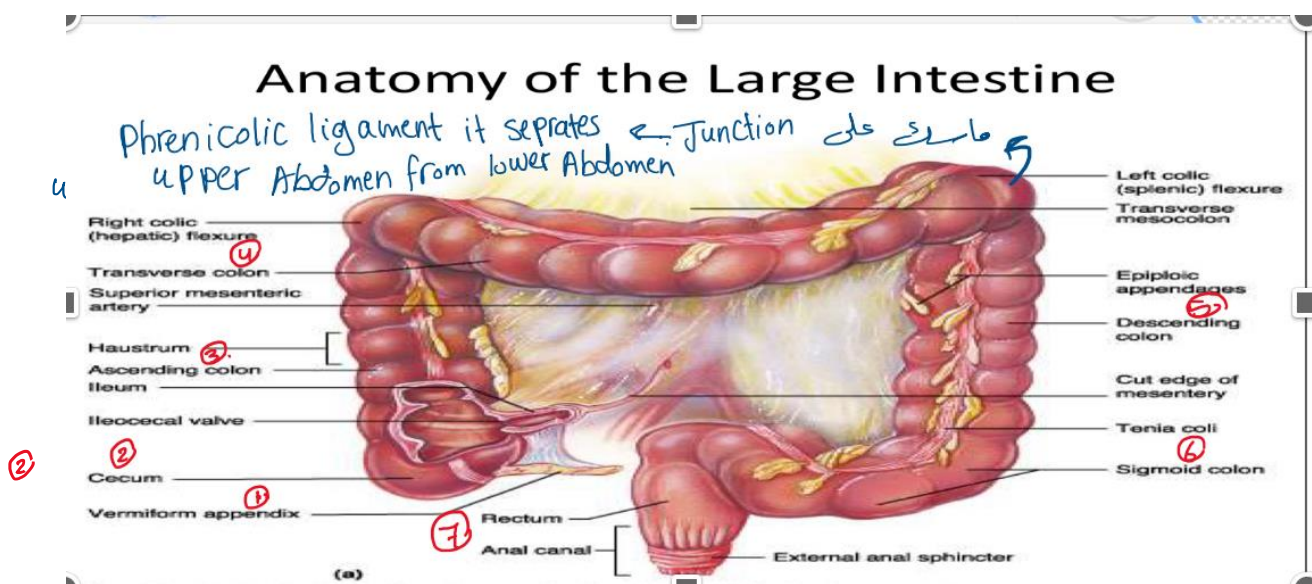
The large intestine is composed of :

- 1) appendix.
- 2) cecum
- 3) Ascending colon
- 4) Transverse colon
- 5) descending colon
- 6) sigmoid
- 7) rectum and anal canal

.The junction between Transverse and ascending colon it is called (Right colic flexure or hepatic flexure)

.on the left side the junction between Transverse and descending colon it is called (left colic flexure or splenic flexure)

Note : splenic usually higher than the right one



Large intestine features:

- 1) The large intestine in diameter larger than small intestine
- 2) The length of the large intestine (1.5-2)m , the small intestine 6m
- 3) The large intestine has sacculation (تكيس) or we call it haustration
- 4) The function of the large intestine is : absorption of water and the formation of feces
- 5) It also has Teania coli (3 bands of smooth muscle) , it descends downward to reach the base of appendix , it isn't present on the appendix and rectum
- 6) It has Tags of fats (زوائد دهنية) or we call it appendices epiploica, except rectum, appendix, cecum

The lengths of the large intestine:

Length= 1.5_2.5 m

Cecum =2.5-3inch

Appendix = 3-5 inch

Ascending colon = 5inch

Transverse colon = 15inch

Descending colon= 10 inch

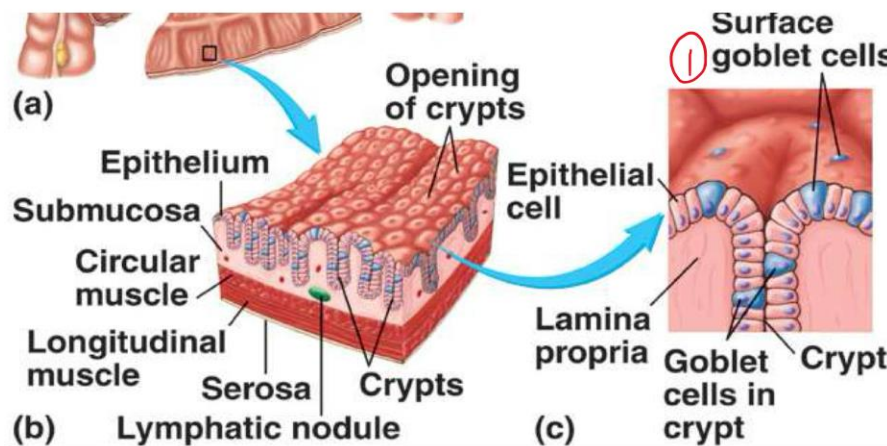
Sigmoid colon = 10-15 inch

Rectum= 5 inch

Anal canal = 4 cm

الدكتور حكا أنو لازم نحفظ هاي الأطوال وأكد أنها مهمة

The histology of large intestine:



① Surface goblet cells : secrete mucus which makes lubrication in the large intestine

The lining epithelium: simple columnar with numerous goblet cells more than small intestine

Why? Because the function is different between them(which is the Absorption of water and formation of feces) and feces is hard object and it needs lubrication

.Also we have gland it presents basally: crypt of lieberkühn , its cells different from the cells of small intestine it doesn't contain paneth cells

Cecum

It is a blind-ended pouch(عاملة زي الكيس)

Site: situated in the right iliac fossa , above the lat ½ of inguinal ligament

Size: It is about 3 inch in diameter

. Completely covered with peritoneum , so it is intraperitoneal organ but it is fixed in the right

The cecum always has intracecal pressure, this pressure helps in two things :

- 1) Helping the materials that reach the cecum to ascend upward in the ascending colon
- 2) Helping the closure of ileocecal valve, this valve is functional not anatomical, there is fold of mucosa around the opening. Fold of mucosa with the intracecal pressure makes closure, the materials reach the cecum and doesn't back up to the ileum

Cecum.... cont :

Cecum it has on it taenia coli which leads to the base of the appendix

يعني مرات الجراح بيدور على ال Appendix. ما بلاقيها
لومشى مع taenia coli لل base بيصل لل base of appendix

Relations of cecum

Anteriorly :

Coils of small intestine -(mostly ileum)

the greater (extends in the greater sac)

omentum

the anterior abdominal wall in the right iliac -
region(if we put our hands on it we can feel
the texture of the cecum)

Posteriorly :

– The psoas and the iliacus muscles -

– the femoral nerve

and the lateral cutaneous nerve of the thigh

posterior-medially → The Appendix is commonly → retrocecal
common external iliac vessels which makes the
femoral artery

• **Medially:**

– Small intestine(ileum)

Blood supply of cecum :

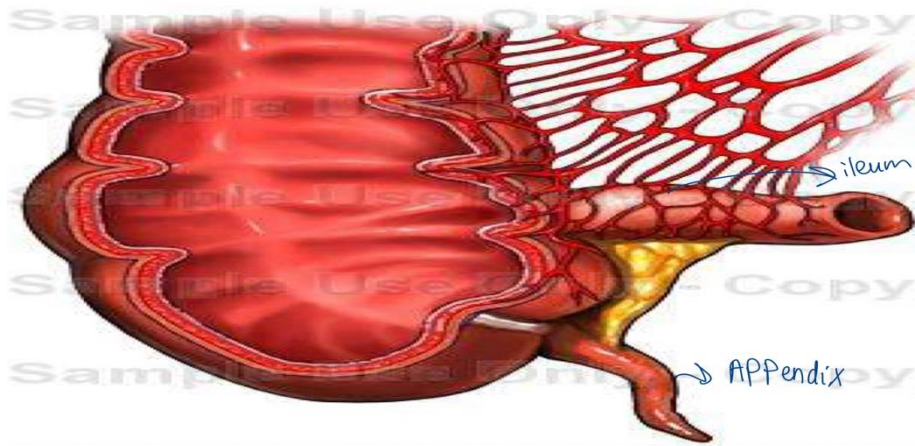
Anterior and posterior cecal arteries
branch of Superior mesenteric artery

The veins : عكسهم تماماً

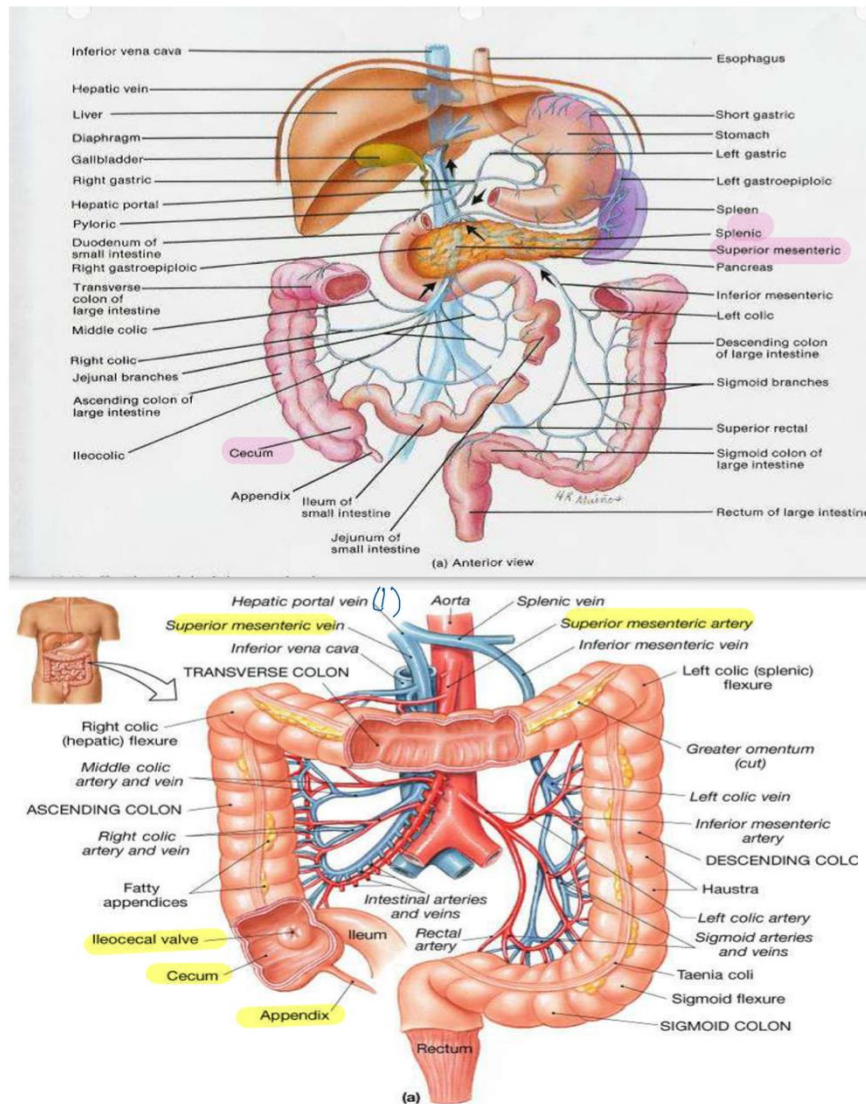
The veins correspond to the arteries and
drain

into the superior mesenteric vein.

Blood supply of cecum




Venous drainage of cecum



- anterior and posterior cecal veins will go to the superior artery mesenteric (1) The site of formation for portal vein
- Superior and splenic vein will form portal vein

Lymphatic Drainage of cecum:

- The lymph vessels pass through several

mesenteric nodes  finally reach the superior

Nerve Supply of cecum:

Branches from the sympathetic and parasympathetic (vagus) nerves form the

superior mesenteric plexus.

The sympathetic branch it goes to the blood vessels and sphincter, The parasympathetic goes to the gland and smooth muscles for peristalsis

Ileocecal Valve :

A rudimentary structure not anatomical sphincter, it is physiological sphincter

- . consists of two horizontal folds of mucous membrane
- . It works as valve that prevents the regurgitation of materials
- . The effects of nerves and hormones affect on the valve

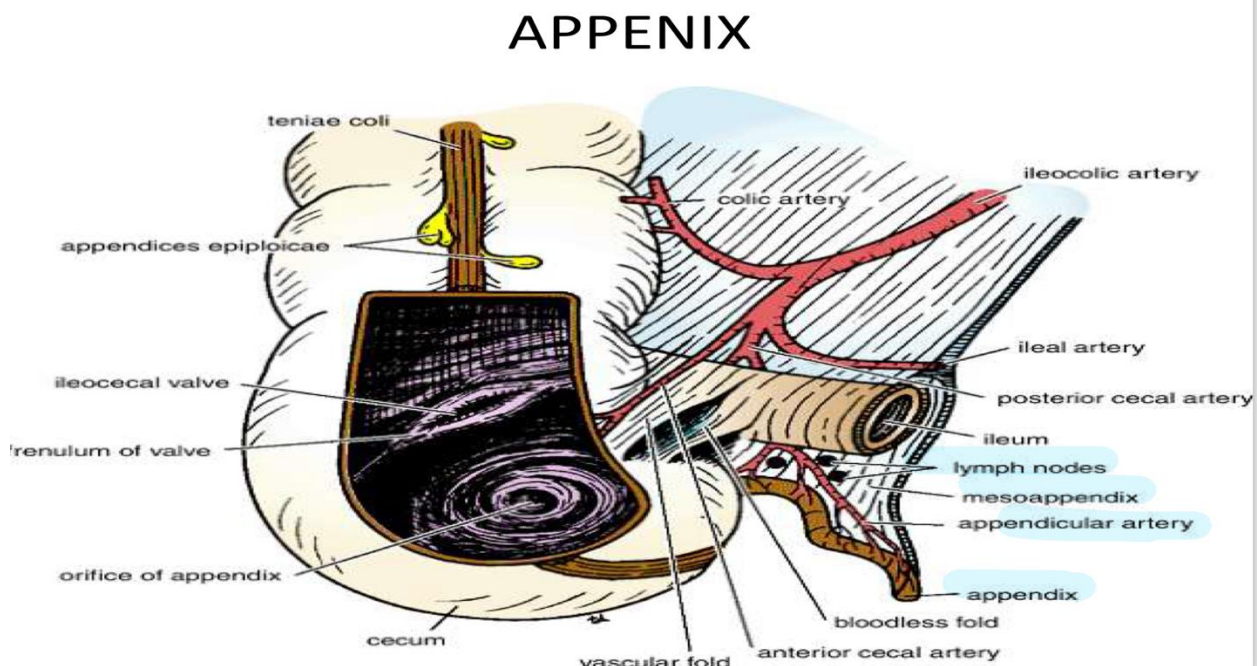
Appendix

- . it is very important because it is frequently infected and the treatment is appendectomy
- . It is a narrow, muscular tube

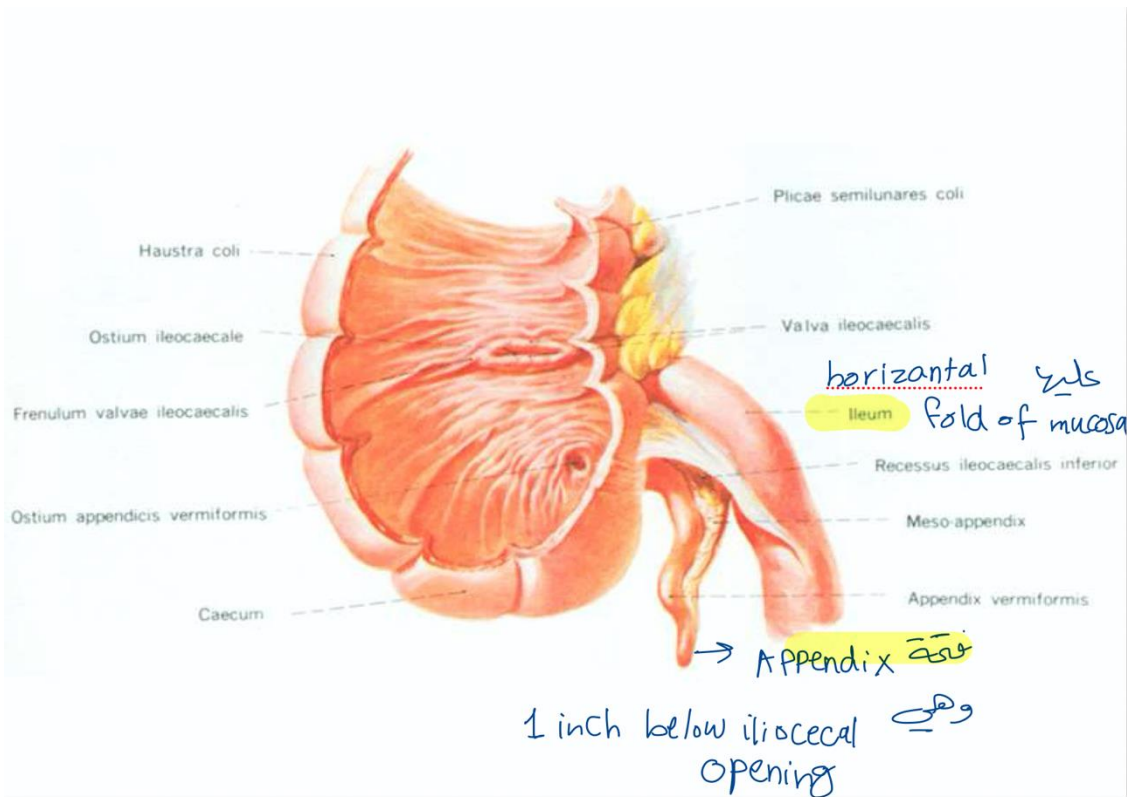
containing a large amount of lymphoid tissue, it doesn't play any role in digestion. It is important in the immunity

. It varies in length from 3 to 5 inch. (2 - 22 cm), when it is infected, it will be expanded

It has a complete peritoneal covering, and it has mesentery we call it



mesoappendix



Appendix cont:

Position:

- 1- Retrocecal in retrocaecal recess behind cecum □ in 74% of people
- 2- pelvic: in pelvis in 21% of people
- 3- Subcaecal: below cecum
- 4- Preileal: in front of ileum
5. Postileal: behind the ileum. 3, 4, 5

تلاتة وأربعة وخمسة جايين عند التقاء
ileum with cecum يا أمامه يا خلفه ونسبتهم قليلة

- Surface anatomy of appendix=
McBurney's point

Its base is situated one third of the way
up the line joining the right
anterior superior iliac spine to the
umbilicus

- To reach the appendix during operation
follow the taenia coli which
converge toward the appendix

if we take a point on the umbilicus region
and a point on the anterior superior iliac
spine and joining them together, bet the
upper two thirds and the lower two thirds (mc Burneys
point). It indicates us the base of appendix. Incision in the
appendectomy through this point parallel to inguinal

ligament. But nowadays , the appendectomy is done by the endoscopy

Blood Supply of appendix:

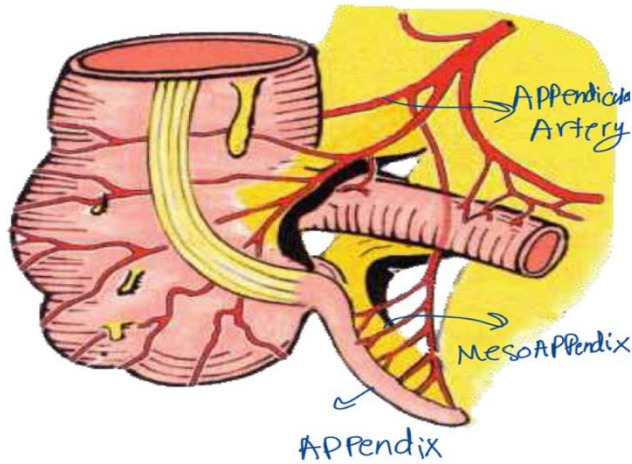
Arteries

- The appendicular artery is a branch of the posterior cecal artery (ilio-cecal.a) which descends behind the ileum.

Veins

- The appendicular vein drains into the posterior cecal vein posterior cecal vein.

posterior cecal vein.



بطلية Appendectomy أهم شيء فعل 2 ligation لـ
Appendicular artery و 2 ligation لـ Appendicular Vein
ببناهم cut و ببصير bleeding

ه يحدت عند base of Appendix ببعلو Circular sketch قبل وقت فجب
الإبرة واطنق من خلال و نطلقا بطريقه Circular بجرين منشد
الخط من الزاوية

Lymphatic Drainage of appendix

- The lymph vessels drain into one or two nodes

lying in the mesoappendix → eventually into

the superior mesenteric nodes

Nerve Supply of appendix:

The skin around the appendix arises from T10 (thoracic spinal nerve number 10) ,itself supplies the appendix

.so when the inflammation occurs in the appendix, first we feel pain around the appendix and then it will concentrate in the right iliac fossa

Clinical notes:

Thrombosis of appendicular. 

gangrene (just one artery for appendix)

Acute cholecystitis 

no gangrene (more than

one artery supply the gallbladder)

لا يُزِيلُ عَلَى الكبد , liver

liver gives direct blood supply to the gallbladder

but APPendix has MesO APPendix and it is
away from The other organ

Why The Tr. of APPendicitis is APPendect only?
it has narrow lumen, The infection will obstruct lumen
